
Antiviral Cellular Therapy for Enhancing T-cell Reconstitution Before or After Hematopoietic Stem Cell Transplantation (ACES)

Grant Award Details

Antiviral Cellular Therapy for Enhancing T-cell Reconstitution Before or After Hematopoietic Stem Cell Transplantation (ACES)

Grant Type: Clinical Trial Stage Projects

Grant Number: CLIN2-10392

Investigator:

Name:	Michael Pulsipher
Institution:	Children's Hospital of Los Angeles
Type:	PI

Disease Focus: Bone Marrow Transplant and Viral Infection, Blood Disorders, Blood Cancer, Cancer

Award Value: \$4,825,587

Status: Active

Grant Application Details

Application Title: Antiviral Cellular Therapy for Enhancing T-cell Reconstitution Before or After Hematopoietic Stem Cell Transplantation (ACES)

Public Abstract:**Therapeutic Candidate or Device**

Partially HLA-matched virus-specific T-cell therapy targeting cytomegalovirus, Epstein-Barr virus, and adenovirus.

Indication

This study will treat persistent viral infections with CMV, EBV, and/or adenovirus in patients with immunodeficiency.

Therapeutic Mechanism

The goal of this study is to use banked virus-specific T-cell therapy in A) patients who have persistent viral infections after bone marrow or cord blood transplant, and B) patients with primary immunodeficiency conditions who have persistent viral infections and have not undergone transplantation.

Unmet Medical Need

Viruses account for up to 40% of deaths in patients with immunodeficiency, and antiviral medications are limited by toxicities and resistance. Restoration of T-cell immunity by adoptive immunotherapy could provide lasting control of targeted viral infections.

Project Objective

Phase 1/2 trial completed

Major Proposed Activities

- To determine the feasibility and safety of administering partially HLA-matched T-cells to treat persistent viral infections.
- To determine the antiviral efficacy of partially HLA-matched T-cells in immunodeficient patients with CMV, EBV, and/or adenoviral infection.
- To determine the effects of partially HLA-matched VST infusion on overall survival at 6 months and 12 months following infusion.

Statement of Benefit to California:

Hundreds of patients undergo hematopoietic stem cell transplantation annually in California, and viral infections pose a serious risk to these patients, as well as patients with primary immunodeficiency disorders. Antiviral therapy is often ineffective without restoration of T-cell immunity in this patient population. Rapid access to banked virus-specific T-cells, which may reconstitute T-cell immunity against these viruses, could be a lifesaving therapy for many of these patients.

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